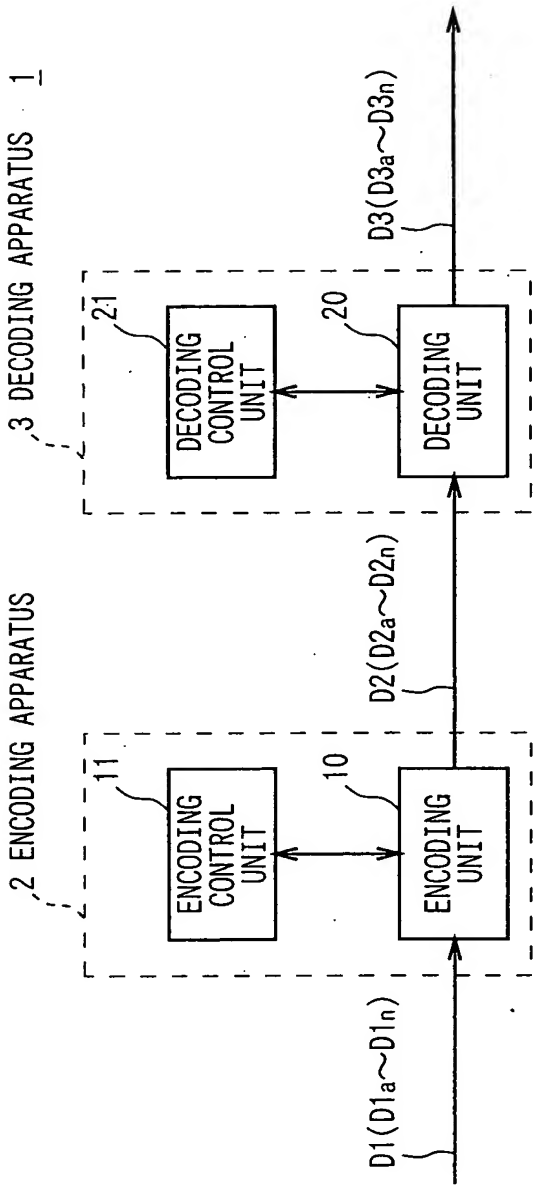
1
2 ENCODING APPARATUS
3 DECODING APPARATUS
ENCODING CONTROL UNIT
ENCODING UNIT
DECODING CONTROL UNIT
DECODING UNIT
10
11
20
21
D1(D1a~D1n)
D2(D2a~D2n)
D3(D3a~D3n)

FIG.1

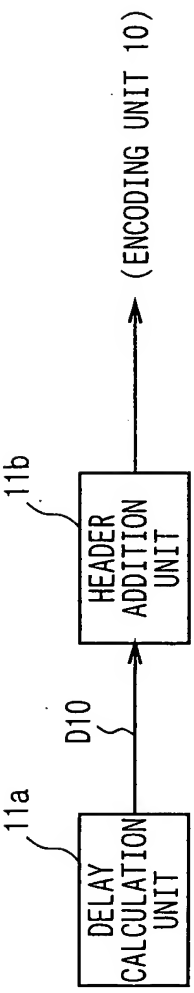
11a
DELAY CALCULATION UNIT
D10
11b
HEADER ADDITION UNIT
(ENCODING UNIT 10)

FIG.2

t	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
EI	I00	B01	B02	B03	P04	B05	B06	B07	I08	B09	B10	B11	P12	B13	B14	B15	P16							
E0				I00	P04	B01	B02	B03	I08	B05	B06	B07	P12	B09	B10	B11	P16	B14	B13	B15				
Ed				6	0	8	8	8	0	8	8	8	0	8	8	8	0	6	10	8				
Dd				4	10	2	2	2	10	2	2	2	10	2	2	2	10	4	0	2				
D0						I00	B01	B02	B03	P04	B05	B06	B07	I08	B09	B10	B11	P12	B13	B14	B15			

FIG.3

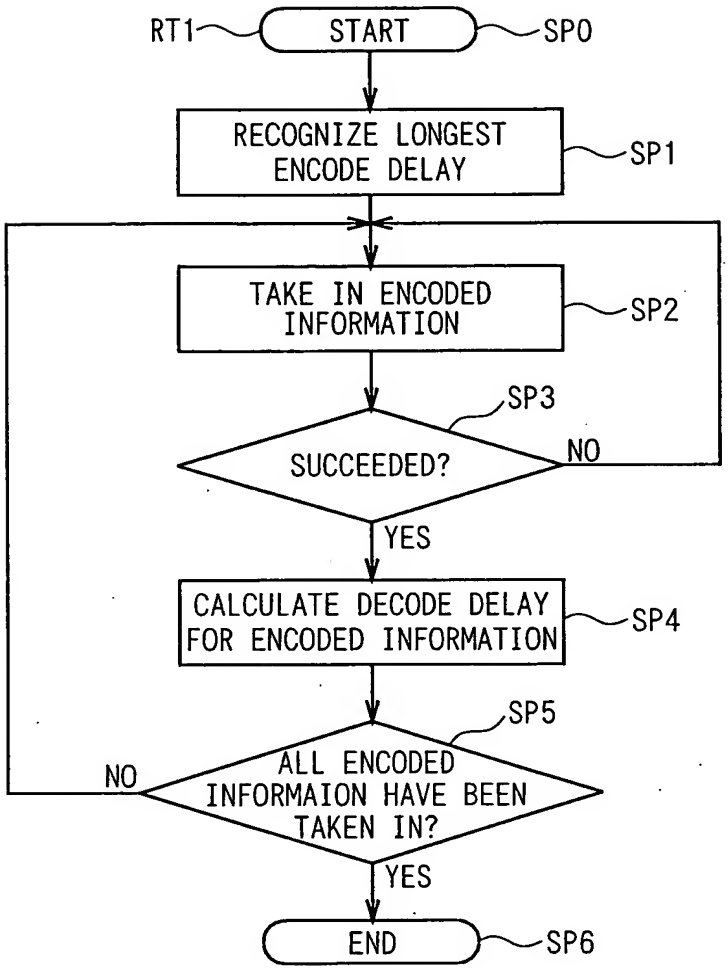
RT1
START
SP0
RECOGNIZE LONGEST ENCODE DELAY
SP1
TAKE IN ENCODED INFORMATION
SP2
SP3
SUCCEEDED?
NO
YES
CALCULATE DECODE DELAY FOR ENCODED INFORMATION
SP4
SP5
NO
ALL ENCODED INFORMAION HAVE BEEN TAKEN IN?
YES
END
SP6

FIG.4

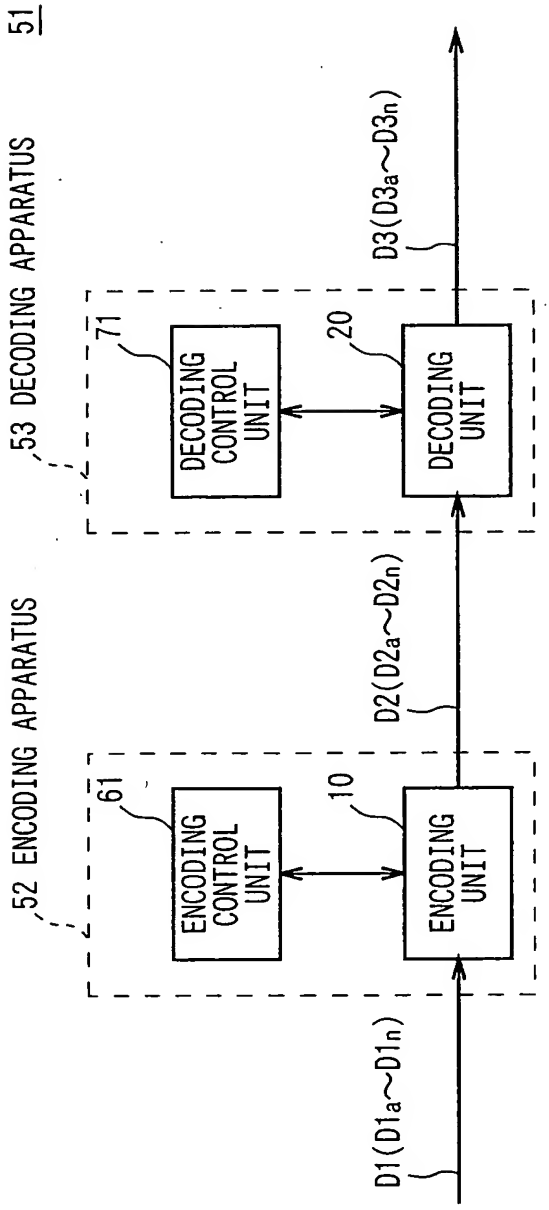
51
52 ENCODING APPARATUS
53 DECODING APPARATUS
ENCODING CONTROL UNIT
ENCODING UNIT
DECODING CONTROL UNIT
DECODING UNIT
61
10
71
20
D1(D1a~D1n)
D2(D2a~D2n)
D3(D3a~D3n)

FIG.5

t	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
EI	I00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	P12	B13	B14	B15	P16							
E0				I00	P01	P02	P03	P04	P05	P06	P07	P08	P09	P10	P11	B12	P16	B15	B14	B13				
Ed				6	6	6	6	6	6	6	6	6	6	6	6	6	0	4	8	12				
Sud				6	6	6	6	6	6	6	6	6	6	6	6	6	12	8	4	0				
Dd				0	2	2	2	2	2	4	4	4	4	4	6	6	12	8	4	0				
D0				I00	I00	P01	P02	P03	P04	P05	P05	P06	P07	P08	P09	P10	P10	P11	P12	B13	B14	B15	P16	

FIG.6

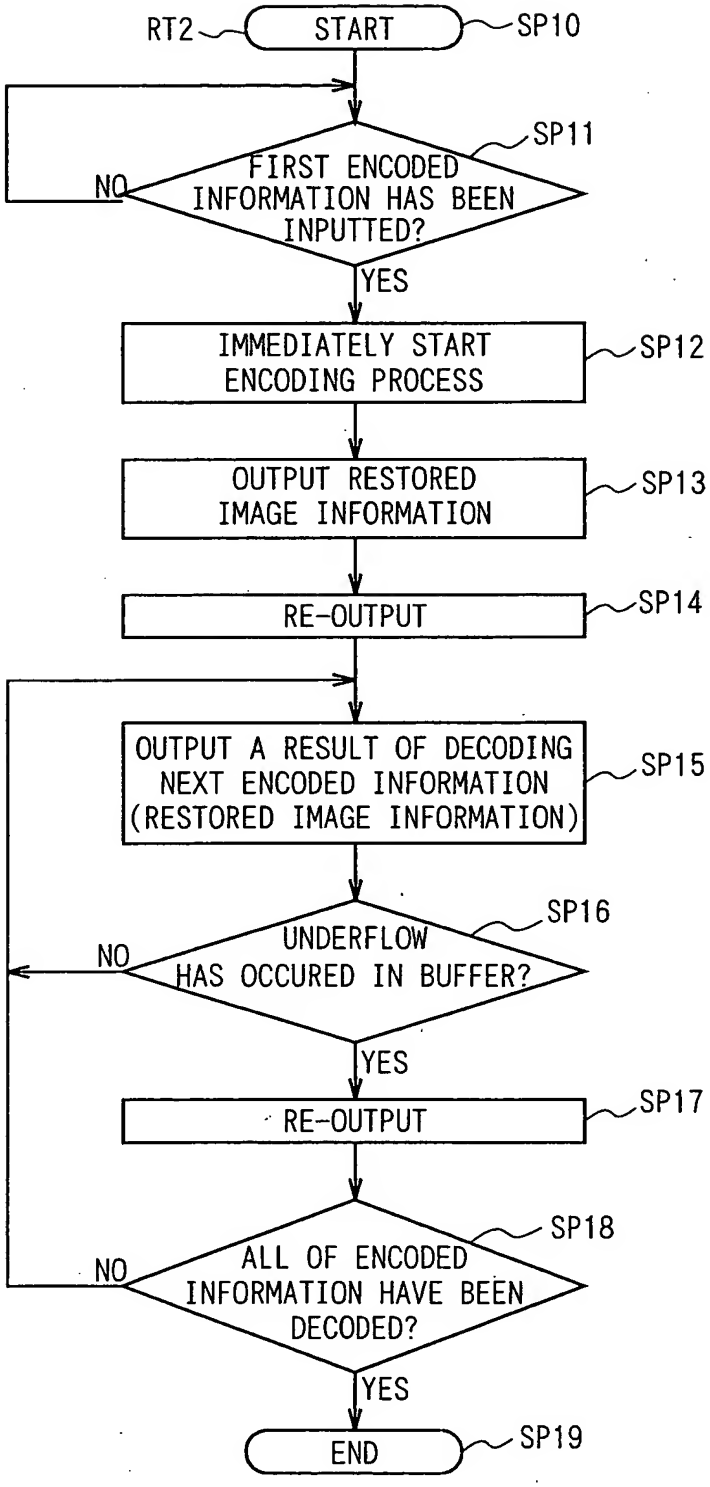
RT2
START
SP10
SP11
FIRST ENCODED INFORMATION HAS BEEN INPUTTED?
NO
YES
IMMEDIATELY START ENCODING PROCESS
SP12
OUTPUT RESTORED IMAGE INFORMATION
SP13
RE-OUTPUT
SP14
OUTPUT A RESULT OF DECODING NEXT ENCODED INFORMATION (RESTORED IMAGE INFORMATION)
SP15
SP16
UNDERFLOW HAS OCCURED IN BUFFER?
NO
YES
RE-OUTPUT
SP17
SP18
ALL OF ENCODED INFORMATION HAVE BEEN DECODED?
NO
YES
END
SP19

FIG.7

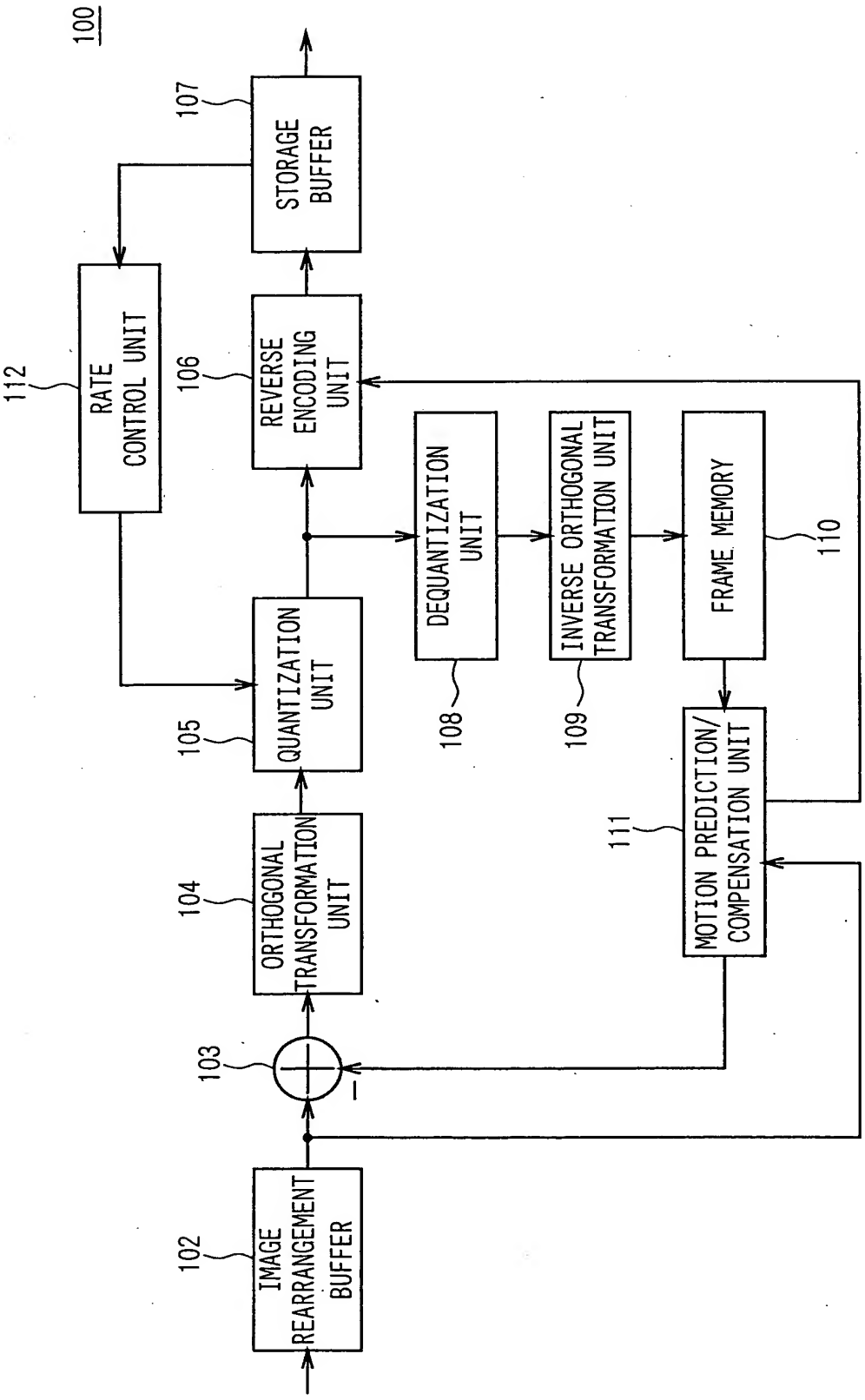
100
IMAGE REARRANGEMENT BUFFER
102
ORTHOGONAL TRANSFORMATION UNIT
104
QUANTIZATION UNIT
105
RATE CONTROL UNIT
112
REVERSE ENCODING UNIT
106
STORAGE BUFFER
107
DEQUANTIZATION UNIT
108
INVERSE ORTHOGONAL TRANSFORMATION UNIT
109
FRAME MEMORY
110
MOTION PREDICTION/ COMPENSATION UNIT
111
103
−

FIG.8

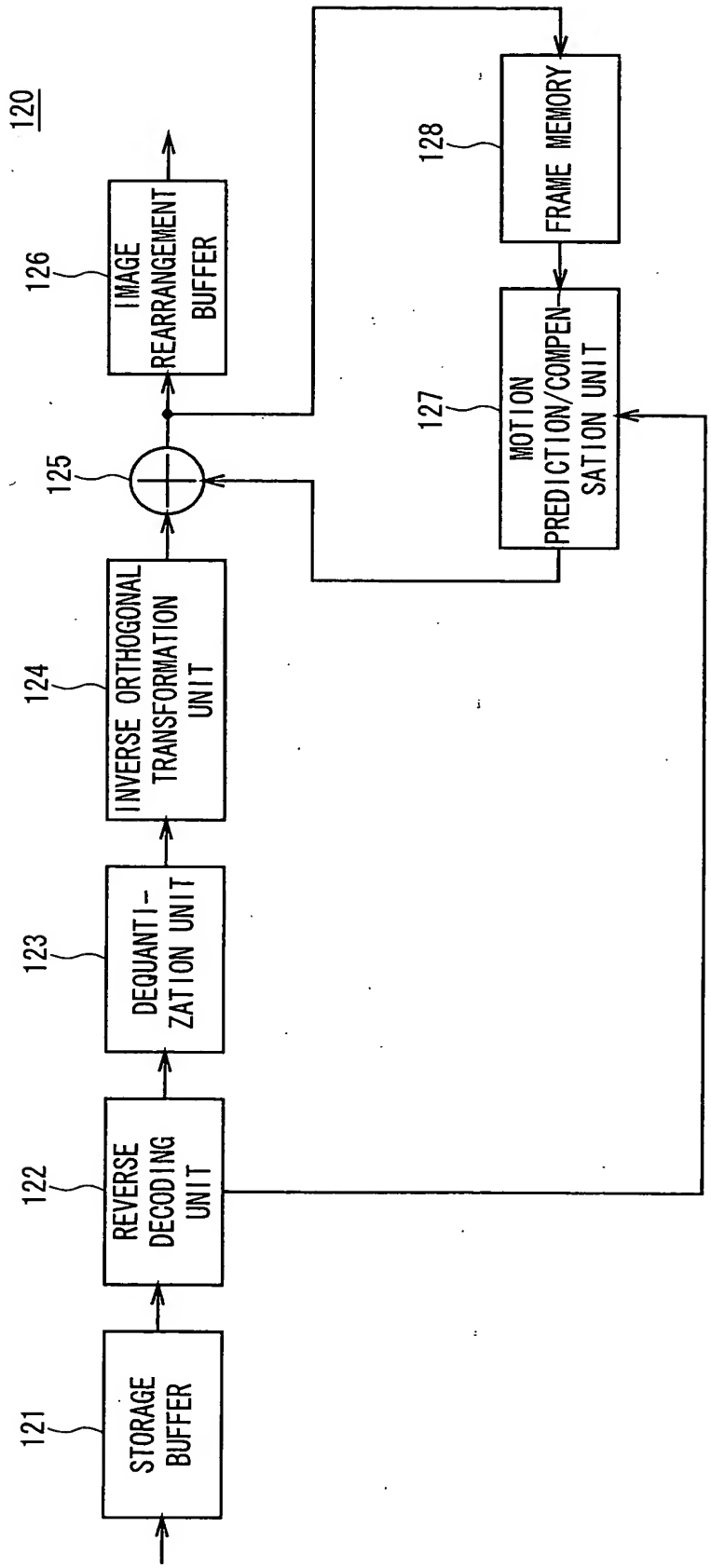
120
121
STORAGE BUFFER
122
REVERSE DECODING UNIT
123
DEQUANTI-ZATION UNIT
124
INVERSE ORTHOGONAL TRANSFORMATION UNIT
125
126
IMAGE REARRANGEMENT BUFFER
127
MOTION PREDICTION/COMPEN-SATION UNIT
128
FRAME MEMORY

FIG. 9

DESCRIPTION OF REFERENCE NUMERALS

1,51·····IMAGE REPRODUCTION SYSTEM, 2,52·····ENCODING APPARATUS, 3,53·····DECODING APPARATUS, 10·····ENCODING UNIT, 11,61·····ENCODING CONTROL UNIT 11a·····DELAY CALCULATION UNIT, 11b·····HEADER ADDITION UNIT, 20·····DECODING UNIT, 21,71·····DECODING CONTROL UNIT